

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) At a server system that is to poll, a method of enhancing performance monitoring for a server system by reducing polling time through the reduction in the number of queries generated to monitor the performance of a plurality of various services provided by the monitored server system, the method comprising:

the step of generating a single query requesting a compilation of information about the performance of a plurality of different services offered by a monitored server system;

the step of transmitting the single query from the polling server system to the monitored server system;

the step of receiving one reply that includes the compilation of information about the performance of the plurality of the different services offered by the monitored server system, without receiving the information about the performance of the plurality of the different services in a piecemeal fashion, wherein the compilation includes:

a first set of information about one or more of the plurality of different services offered by the monitored server system and gathered by the monitored server system in response to its receipt of the single query transmitted from the polling server system; and

a second set of information about one or more of the plurality of different services, which second set of information was gathered by the monitored server system autonomously and using at least one interval established in the monitored server system as opposed to the polling server system;

the step of using the compilation to update at least a first and a second server system lists with information on the monitored server system, wherein server systems included within the first server system list are polled more frequently than server systems included within the second server system list.

2. (Original) The method of Claim 1, further comprising:
the step of, at the polling server system, receiving from a client system a request for at least some of the information contained in the compilation; and
the step of transmitting the at least some of the information contained in the compilation from the polling server system to the client system in response to the request.
3. (Original) The method of Claim 1, further comprising:
the step of automatically transmitting at least some of the information contained in the compilation from the polling server system to a client system.
4. (Original) The method of Claim 1, wherein the compilation comprises a status of network services of the monitored server system.
5. (Original) The method of Claim 4, wherein the network services comprise a directory service.
6. (Original) The method of Claim 4, wherein the network services comprise a message store service.
7. (Original) The method of Claim 4, wherein the network services comprise a message transfer agent.
8. (Original) The method of Claim 4, wherein the network services comprise a facsimile communications service.
9. (Original) The method of Claim 4, wherein the network services comprise an Internet communications service.
10. (Original) The method of Claim 4, wherein the network services comprise a messaging service.

11. (Original) The method of claim 10, further comprising:

the step of, at the monitored server system, automatically attempting to establish a working connection to a mailbox in the messaging service;

the step of, at the monitored server system, determining whether the working connection is established; and

the step of reporting the result of the step of determining in the compilation.

12. (Original) The method of claim 11, further comprising:

the step of, depending on the result of the step of determining, automatically attempting to determine whether a message is available at the mailbox; and

the step of, depending on the result of the step of determining whether the working connection is established, automatically reporting in the compilation the result of the step of determining whether a message is available at the mailbox.

13. (Original) The method of claim 12, further comprising:

the step of, depending on the result of the step of automatically attempting to determine whether a message is available at the mailbox, attempting to read the message; and

the step of, depending on the result of the step of automatically attempting to determine whether a message is available at the mailbox, reporting in the compilation the result of the step of attempting to read the message.

14. (Original) The method of claim 11, wherein the result of the step of automatically attempting to establish a working connection depends on the messaging services' acceptance of a security code.

15. (Original) The method of claim 11, wherein the step of automatically attempting to establish a working connection is driven by a detection of a failure in the messaging service.

16. (Original) The method of claim 11, wherein the method further comprises the step of exercising a software service used in the establishment of a user's working connection.

17. (Original) The method of claim 16, wherein the software service comprises a buffer service.

18. (Original) The method of claim 1, further comprising:

the step of, at the polling server system, installing polling software capable of performing the step of transmitting the single query from the polling server system to the monitored server system; and

the step of, at the monitored server system, installing attendant software capable of generating the compilation of information about the performance of the plurality of services offered by the monitored server system.

19. (Original) The method of claim 18, further comprising:

the step of the attendant software monitoring a time indicator at the monitored server system; and

the step of the attendant software including a time indication based at the monitored server system with the compilation.

20. (Original) The method as defined in claim 19, further comprising:

the step of the polling software monitoring a master time indicator at the polling server system to determine a master time indication; and

the step of comparing the time indication in the compilation with the master time indication of the polling server system.

21. (Original) The method of claim 20, further comprising:

the step of, if the difference between the time indication in the compilation and the master time indication exceeds a maximum permissible difference, the polling software at the polling server system causing the time indicator at the monitored server system to be updated to more accurately match the master time indication at the polling server system.

22. (Original) The method of claim 1, further comprising the step of, at the monitored server system, generating the compilation of information about the performance of the plurality of services offered by the monitored server system.

23. (Cancelled).

24. (Previously Presented) The method of claim 1, wherein the step of using the compilation to update at least one server system list comprises:

the step of listing the monitored server system in a normal server system list if the compilation does not indicate any deficiencies in the monitored server system; and

the step of listing the monitored server system in a critical server system list if the compilation indicates deficiencies in the monitored server system, wherein the first server systems list is the critical server system list and the second server system list is the normal server system list.

25. (Previously Presented) The method of claim 24, wherein the compilation is a current compilation, wherein the step of using the compilation to update at least one server system list comprises

the step of transferring the monitored server system from the normal server system list to the critical server system list if a previous compilation indicated no deficiencies in the monitored server system, but a current compilation indicates a deficiency in the monitored server system.

26. (Previously Presented) The method of claim 25, wherein the step of transferring the monitored server system from the normal server system list to the critical server system list is caused by a polling software settings set in the polling server system by a system administrator.

27. (Previously Presented) The method of claim 24, wherein the compilation is a current compilation, wherein the step of using the compilation to update at least one server system lists comprises the step of transferring the monitored server system from the critical server system list to the normal server system list if a previous compilation indicated deficiencies in the monitored server system, but the current compilation indicates no deficiencies in the monitored server system.

28. (Original) The method of claim 27, wherein the step of transferring the monitored server system from a critical server system list to a normal server system list is caused by a setting of polling software set in the polling server system by a system administrator.

29. (Cancelled).

30. (Previously Presented) At a server system that is to be monitored, a method of enhancing performance monitoring for a server system by reducing polling time through the reduction in the number of queries generated to monitor the performance of a plurality of various services provided by the monitored server system, the method comprising:

the step of receiving a single query from a server system that is to poll, wherein the single query requests a compilation of information about the performance of a plurality of different services offered by the monitored server system;

the step of determining the plurality of different services that information about the performance thereof is requested;

the step of the monitored server system generating one reply that includes the compilation of information about the performance of the plurality of the different services offered by the monitored server system, wherein the compilation indicates that at least a first of the plurality of different services has one or more performance deficiencies, and wherein the step of generating one reply that includes the compilation of information includes:

in response to receiving the single query and determining the plurality of different services, gathering a first set of data about the plurality of different services and adding the first set of data to the reply; and

adding a second set of data to the reply, the second set of data including information about the plurality of different services, the second set of data being gathered by the monitored server system autonomously and independent of receipt of the single query;

the step of transmitting the compilation from the monitored server system to the polling server system, without transmitting the information about the performance of the plurality of the different services in a piecemeal fashion; and

based on the indication that the at least one of the plurality of different services has one or more performance deficiencies, the step of receiving with increased frequency polling requests for information about the performance deficiencies for the at least one of the plurality of different services.

31. (Currently Amended) At a server system that is to poll, ~~a computer-readable medium~~ one or more storage-type computer-readable media for implementing a method of enhancing performance monitoring for a server system by reducing polling time through the reduction in the number of queries generated to monitor the performance of a plurality of various services provided by the monitored server system, the ~~computer-readable medium~~ one or more storage-type computer-readable media having stored thereon computer-executable instructions for performing the following:

the step of generating a single query requesting a compilation of information about the performance of a plurality of different services offered by a server system that is to be monitored;

the step of transmitting the single query from the polling server system to the monitored server system;

the step of, at the polling server system, receiving one reply that includes the compilation of information about the performance of the plurality of the different services offered by the monitored server system, without receiving the information about the performance of the plurality of the different service in a piecemeal fashion, wherein the compilation includes:

a first set of information about one or more of the plurality of different services offered by the monitored server system and gathered by the monitored server system in response to its receipt of the single query transmitted from the polling server system; and

a second set of information about one or more of the plurality of different services, which second set of information was gathered by the monitored server system autonomously and using at least one interval established in the monitored server system as opposed to the polling server system; and

the step of using the compilation of information to update at least a first and a second server system lists with information on the monitored server system, wherein server systems included within the first server system list are polled more frequently than server systems included within the second server system list.

32. (Cancelled).

33. (Currently Amended) At a computer system that is to be monitored, ~~a computer-readable medium~~ one or more storage-type computer-readable media for implementing a method of enhancing performance monitoring for a server system by reducing polling time through the reduction in the number of queries generated to monitor the performance of a plurality of various services provided by the monitored server system, the one or more storage-type computer-readable media ~~computer-readable medium~~ having stored thereon computer-executable instructions for performing the following:

the step of receiving a single query from a server system that is to poll, wherein the single query requests a compilation of information about the performance of a plurality of different services offered by the monitored server system;

the step of determining the plurality of different services that information about the performance thereof is requested;

the step of the monitored server system generating on reply that includes the compilation of information about the performance of the plurality of the different services offered by the monitored server system wherein the compilation indicates that at least a first of the plurality of different services has one or more performance deficiencies, and wherein the step of generating one reply that includes the compilation of information includes:

in response to receiving the single query and determining the plurality of different services, gathering a first set of data about the plurality of different services and adding the first set of data to the reply; and

adding a second set of data to the reply, the second set of data including information about the plurality of different services, the second set of data being gathered by the monitored server system autonomously and independent of receipt of the single query;

the step of transmitting the compilation from the monitored server system to the polling server system, without transmitting the information about the performance of the plurality of the different services in a piecemeal fashion; and

based on the indication that the at least one of the plurality of different services has one or more performance deficiencies, the step of receiving with increased frequency polling requests for information about the performance deficiencies for the at least one of the plurality of different services.

34. (Previously Presented) The computer-readable medium of claim 33, wherein the computer-executable instructions for performing the step of generating the compilation of information are for performing the following:

the step of automatically attempting to establish a working connection to a mailbox in a messaging system of the monitored server system;

the step of determining whether the working connection is established; and

the step of including the result of the attempt in the compilation, wherein the one or more performance deficiencies is directed toward the working connection to the mailbox.

35. (Original) The computer-readable medium of claim 34, wherein the computer-executable instructions for performing the step of generating the compilation of information are further for performing the following:

the step of, depending on the result of the step of determining whether the working connection is established, automatically attempting to determine whether a message is available at the mailbox; and

the step of, depending on the result of the step of determining whether the working connection is established, including the result of the step of automatically attempting to determine whether a message is available at the mailbox in the compilation.

36. (Original) The computer-readable medium of claim 35, wherein the computer-executable instructions for performing the step of generating the compilation of information are further for performing the following:

the step of, depending on the result of the step of automatically attempting to determine whether a message is available, attempting to read the message; and

the step of, depending on the result of the step of automatically attempting to determine whether a message is available, including the result of the step of attempting to read the message in the compilation.

37. (Previously Presented) At a server system that is to poll, a method of enhancing performance monitoring for a server system by reducing polling time through the reduction in the number of queries generated to monitor the performance of a plurality of various services provided by the monitored server system, the method comprising:

the act of generating a single query requesting a compilation of information about the performance of a plurality of different messaging services offered by a monitored server system, wherein the plurality of different messaging services offered by the monitored server system include a directory service, a message store service, and a message transfer agent service, wherein the single query is generated using polling software installed on the polling server system, and wherein the polling server system is connected to the monitored server system over a network;

the act of transmitting the single query from the polling server system to the monitored server system over the network;

the act of receiving one reply that includes the compilation of information about the performance of the plurality of the different messaging services offered by the monitored server system, including about at least the directory service, message store service, and message transfer agent service, without receiving the information about the performance of the plurality of the different messaging services in a piecemeal fashion, wherein the compilation includes:

a first set of information about one or more of the plurality of difference messaging services, which first set of information was gathered by the monitored server system in response to its receipt of the single query; and

a second set of information about one or more of the plurality of different messaging services, which second set of information was gathered by the monitored server system autonomously, and which includes:

information about a buffer service associated with the message store service, which information was gathered autonomously by the monitored server system at a first interval; and

information about a facility for updating the buffer service, wherein the facility tests communications between the buffer service and the message store service, and wherein the information about the facility was gathered autonomously by the monitored server system at a second interval greater than the first interval;

the act of determining that the compilation indicates a deficiency in at least one deficient service of the plurality of the different messaging services; and

using the compilation to update a critical server system list with information on the monitored server system, such that the monitored server system is polled by the polling server system more frequently than other servers associated with normal server systems when the compilation indicates a deficiency in even a single of the plurality of different messaging services.

38. (Previously Presented) The method of claim 30, wherein the different services that are determined are based on a pre-selected group of different services set by an administrator for the monitored server system.